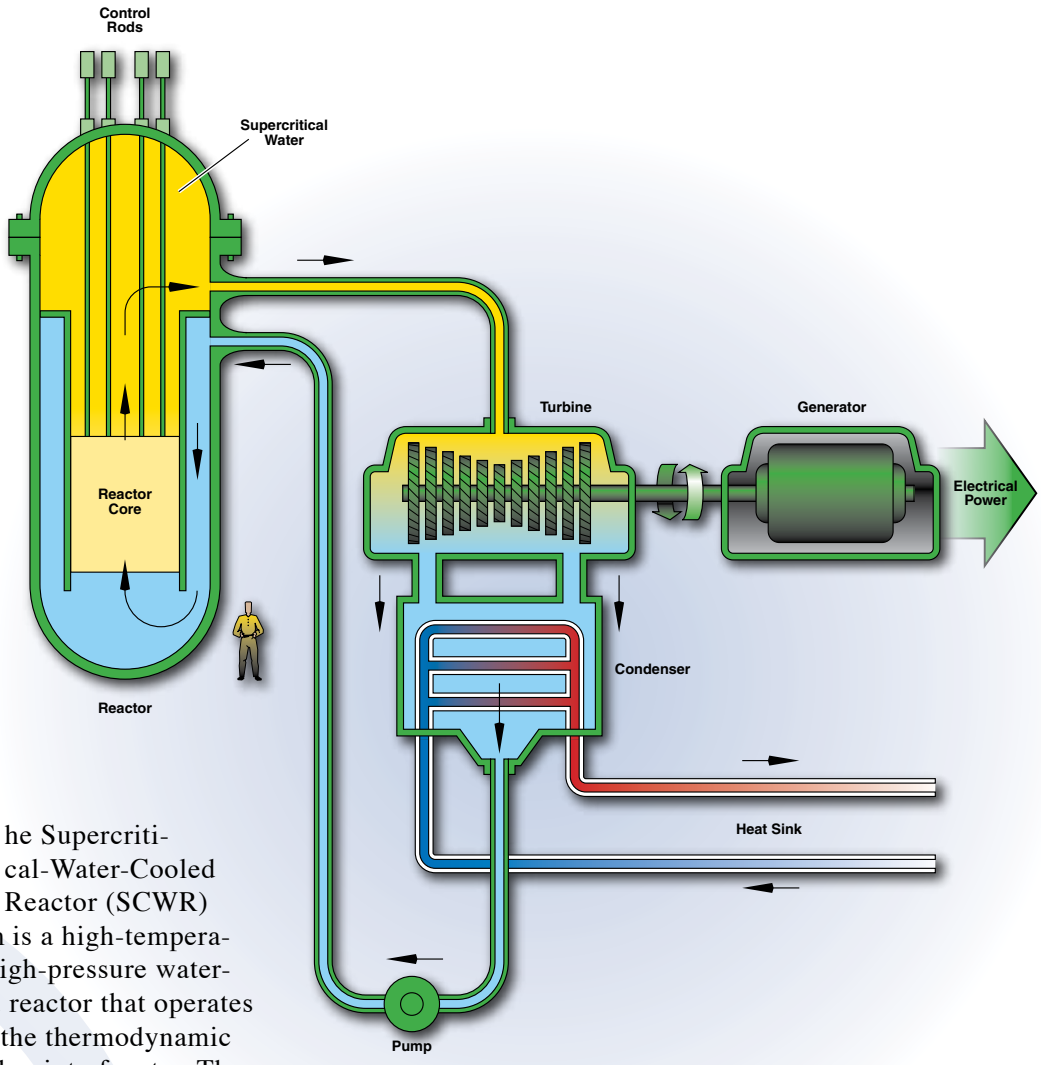
Supercritical-Water-Cooled Reactor (SCWR)

The SCWR system is primarily designed for efficient electricity production, with the capability for actinide management depending on the core design.



The Supercritical-Water-Cooled Reactor (SCWR) system is a high-temperature, high-pressure water-cooled reactor that operates above the thermodynamic critical point of water. The SCWR system is primarily designed for efficient electricity production, with the capability for actinide management depending on the core design. The SCWR can be designed as either a thermal or fast-spectrum reactor. The thermal design is primarily for electricity generation. The fast-spectrum reactor has a closed fuel cycle and full actinide recycle based on advanced aqueous processing at a central location. The reference system is 1,700 MWe with an operating pressure of 25 MPa, and a reactor outlet temperature of 510 degrees Celsius, possibly ranging up to 550 degrees Celsius. The fuel is uranium oxide. Passive safety features similar to those of simplified boiling water reactors are incorporated.

Nuclear Programs

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